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[4910-13-U]

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2011-1036; Directorate Identifier 2010-SW-088-AD; Amendment 39-16819; AD 2011-20-08]**

**RIN 2120-AA64**

**Airworthiness Directives; Agusta S.p.A. (Agusta) Model AB139 and AW139**

### **Helicopters**

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Final rule; request for comments.

**SUMMARY:** This amendment adopts a new airworthiness directive (AD) for the specified Agusta model helicopters. This action requires inspecting certain modules and related connectors for corrosion. If there is corrosion on the connectors, this AD requires cleaning the connectors before further flight. If there is corrosion on a module, before further flight, this AD requires replacing the module with an airworthy module. This AD also requires modifying the Number 2 Modular Avionic Unit (MAU) ventilation duct. This amendment is prompted by some in-flight emergencies due to internal corrosion of the MAU circuit card assemblies. The actions specified in this AD are intended to detect corrosion of certain modules to prevent the display of misleading data to the flight crew, disengagement of the flight director modes of the autopilot or other alert system, increased workload of the flight crew, and subsequent loss of control of the helicopter.

**DATES:** Effective [insert date 15 days after date of publication in the **Federal Register**].

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of [insert date 15 days after date of publication in the **Federal Register**].

Comments for inclusion in the Rules Docket must be received on or before [insert date 60 days after date of publication in the **Federal Register**].

**ADDRESSES:** Use one of the following addresses to submit comments on this AD:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

You may get the service information identified in this AD from Agusta, Via Giovanni Agusta, 520 21017 Cascina Costa di Samarate (VA), Italy, telephone 39 0331-229111, fax 39 0331-229605/222595, or at [http://customersupport.agusta.com/technical\\_advice.php](http://customersupport.agusta.com/technical_advice.php).

**EXAMINING THE DOCKET:** You may examine the docket that contains the AD, any comments, and other information on the Internet at <http://www.regulations.gov>, or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Operations office (telephone (800) 647-5527) is located in Room W12-140 on the ground floor of the West Building at the street address stated in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** George Schwab, Aviation Safety Engineer, FAA, Rotorcraft Directorate, Safety Management Group, 2601 Meacham Blvd., Fort Worth, Texas 76137, telephone (817) 222-5114, fax (817) 222-5961.

**SUPPLEMENTARY INFORMATION:**

**Discussion**

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA AD No. 2010-0189, dated September 23, 2010, to correct an unsafe condition for the Agusta Model AB139 and AW139 helicopters. EASA advises of some in-flight emergencies resulting from internal corrosion of the MAU2 circuit card assemblies. Analysis of the in-flight emergencies identified salt water and extreme moisture as contributory factors. The corrosion resulted from the MAU2 being exposed to external moisture as a result of the ventilation duct installation that routes external air directly on the MAU2 modules. When exposed to high levels of moisture, EASA states the MAU can cause the system to provide false indications or misleading data to be displayed to the flight crew. Also, misleading data may cause disengagement of the flight director modes of the autopilot or other alerting

system anomalies. They also state that these failures and anomalies would significantly increase the workload of the flight crew and could ultimately lead to loss of control of the helicopter.

#### **Related Service Information**

Agusta has issued Bollettino Tecnico No. 139-166, dated April 6, 2009 (BT), which specifies inspecting the MAU2 cards to ensure they are corrosion free. Also, the BT specifies procedures for modifying to reroute the direct flow of air coming from the ventilation duct outlet MAU2 ventilation away from the MAU2 cabinet and modules. EASA classified this service information as mandatory and issued AD No. 2010-0189, dated September 23, 2010, to ensure the continued airworthiness of these helicopters.

#### **FAA's Evaluation and Unsafe Condition Determination**

These helicopters have been approved by the aviation authority of Italy and are approved for operation in the United States. Pursuant to our bilateral agreement with Italy, EASA, their technical representative, has notified us of the unsafe condition described in the EASA AD. We are issuing this AD because we evaluated all information provided by EASA and determined the unsafe condition exists and is likely to exist or develop on other helicopters of these same type designs.

#### **Differences Between this AD and the EASA AD**

We do not require reporting inspection results nor coordinating with the manufacturer in returning modules as indicated in the BT that EASA references. Also, we have used a different compliance time for the action.

## **FAA's Determination and Requirements of This AD**

This unsafe condition is likely to exist or develop on other helicopters of the same type design. Therefore, this AD is being issued to detect corrosion of certain modules, to prevent the display of misleading data, disengagement of the flight director modes of the autopilot or other alert system anomalies, increased workload of the flight crew, and subsequent loss of control of the helicopter. This AD requires, at a specified interval, inspecting certain modules and related connectors for corrosion. If there is corrosion on the connectors, this AD requires cleaning the connectors before further flight. If there is corrosion on a module, this AD requires replacing the module with an airworthy module. This AD also requires modifying the MAU2 ventilation duct.

The short compliance time involved is required because the previously described critical unsafe condition can adversely affect the controllability of the helicopter. Therefore, inspecting, replacing, or modifying certain modules is required within a very short compliance time, 30 hours time-in-service or 1 month, whichever occurs first, so this AD must be issued immediately.

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

## **Costs of Compliance**

We estimate that this AD will affect about 26 helicopters of U.S. registry. We also estimate that it will take 6 work hours to remove, inspect the modules for corrosion, and replace the corroded modules, and 2 work hours to reroute the ventilation tube. The average labor rate is \$85 per work-hour. Required parts will cost about \$360,738 per

helicopter to replace corroded modules and \$440 for parts to modify the ventilation tube. Based on these figures, we estimate the cost of this AD on U.S. operators is \$361,858 per helicopter or \$9,408,308 for the U.S. fleet, assuming the modules would be replaced on the entire fleet.

### **Comments Invited**

This AD is a final rule that involves requirements that affect flight safety and was not preceded by notice and an opportunity for public comment; however, we invite you to submit any written data, views, or arguments regarding this AD. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2011-1036; Directorate Identifier 2010-SW-088-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the AD. We will consider all comments received by the closing date and may amend the AD in light of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this AD. Using the search function of the docket web site, you can find and read the comments to any of our dockets, including the name of the individual who sent the comment. You may review the DOT’s complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78).

### **Regulatory Findings**

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States,

on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
3. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared an economic evaluation of the estimated costs to comply with this AD. See the AD docket to examine the economic evaluation.

#### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, “General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. Section 39.13 is amended by adding a new airworthiness directive to read as follows:

2011-20-08 **AGUSTA S.p.A.:** Amendment 39-16819; Docket No. FAA-2011-1036; Directorate Identifier 2010-SW-088-AD.

**Applicability:** Models AB139 and AW139 helicopters, serial number (S/N) 31005 through S/N 31157 (except S/Ns 31007, 31094 and 31149) and S/N 41001 through S/N 41023, certificated in any category.

**Compliance:** Within 30 hours time-in-service (TIS) or 30 days, whichever occurs earlier, unless done previously:

To detect corrosion of certain modules, to prevent the display of misleading data to the flight crew, disengagement of the flight director modes of the autopilot or other alert system, increased workload of the flight crew, and subsequent loss of control of the helicopter, do the following:

(a)(1) Remove the following items related to the Numbers 1 and 2 Modular

Avionics Unit (MAU):

(i) Power supply (PS) module, part number (P/N) 7024440-1901;

(ii) Custom Input/Output (CSIO) module, P/N 7025410-1901;

(iii) Control Input/Output (CIO) module, P/N 7026534-1902;

(iv) MAU cabinet; and

(2) Inspect the PS, CSIO, CIO, and MAU cabinet and all related connectors for corrosion.

(i) If there is corrosion on a connector, before further flight, clean the connector.

(ii) If there is corrosion on a module, before further flight, replace the module with an airworthy module.

(b) Modify the Number 2 MAU ventilation duct by following the Compliance Instructions, paragraphs 6 through 11, of Agusta Bollettino Tecnico No. 139-166, dated April 6, 2009 (BT).

(c) Install and operationally test the Number 1 and Number 2 MAUs and the related PS module, CSIO module, CIO module, MAU cabinet, and all related connectors.

(d) Reinstall the AFT right float assembly or the lower panel, P/N 3P5340A01631, whichever was removed during the modification process required by paragraph (b) of this AD.

(e) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Contact the Manager, Safety Management Group, ATTN: George Schwab, Aviation Safety Engineer, FAA,

Rotorcraft Directorate, Safety Management Group, 2601 Meacham Blvd., Fort Worth, Texas 76137, telephone (817) 222-5114, fax (817) 222-5961.

(f) The Joint Aircraft System/Component (JASC) Code is 3425: Navigation, Integrated Flight Director System.

(g) Modifying the ventilation duct shall be done by following specified portions of Agusta Bollettino Tecnico No. 139-166, dated April 6, 2009. The Director of the Federal Register approved this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Agusta, Via Giovanni Agusta, 520 21017 Cascina Costa di Samarate (VA), Italy, telephone 39 0331-229111, fax 39 0331-229605/222595, or at [http://customersupport.agusta.com/technical\\_advice.php](http://customersupport.agusta.com/technical_advice.php). Copies may be inspected at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:

[http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

(h) This amendment becomes effective on [insert date 15 days after date of publication in the **Federal Register**].

Note: The subject of this AD is addressed in the European Aviation Safety Agency (Italy) AD No. 2010-0189, dated September 23, 2010.

Issued in Fort Worth, Texas, on August 29, 2011.

Kim Smith,

Manager, Rotorcraft Directorate,

Aircraft Certification Service.

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